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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,366

01/23/2006

Rolf Hartung

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03/18/2009

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EXAMINER

YOUNG, SHAWQUA

ART UNIT

PAPER NUMBER

1626

MAIL DATE

DELIVERY MODE

03/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,366	Applicant(s) HARTUNG ET AL.	
	Examiner SHAWQUIA YOUNG	Art Unit 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/20/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 28-47 are currently pending in the instant application. Applicants have cancelled claims 10-27 and added new claims 28-47 in an amendment filed on November 20, 2008. Claims 28-47 are being rejected in this Office Action.

I. *Response to Arguments/Remarks*

Applicants' amendment, filed on November 20, 2008, has overcome the rejection of claims 10-27 under 35 USC 112, first paragraph as failing to comply with the written description requirement; the rejection of claims 10-27 under 35 USC 112, second paragraph as being incomplete for omitting essential structural cooperative relationships of elements; and the objection of claims 10-27 as containing non-elected subject matter. The above rejections and objection have been withdrawn.

II. *Information Disclosure Statement*

The information disclosure statement (IDS) submitted on November 20, 2008 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

III. *Rejection(s)*

35 USC § 103 - OBVIOUSNESS REJECTION

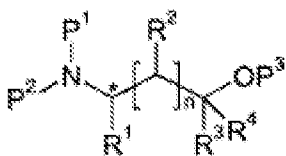
The following is a quotation of 35 U.S.C. § 103(a) that forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Graham v. John Deere Co. set forth the factual inquiries necessary to determine obviousness under 35 U.S.C. § 103(a). See *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Specifically, the analysis must employ the following factual inquiries:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 28-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Minnaard, et al.* (Synthetic communications, 29, 1999) in view of *Schuda, et al.* (J. Org. Chem. 1988, 53). Applicants claim a process for the hydrogenation of a compound, comprising hydrogenating a C₆-C₁₈ aromatic substituted amino acid or C₆-C₁₈ aromatic substituted amino alcohol in the presence of a platinum-rhodium mixed catalyst, wherein said amino acid or amino alcohol is of the formula



wherein all variables are as defined in claim 28. Claim 41 is drawn to a process for the hydrogenation of a compound selected from the group consisting of : L-phenylalanine, D-phenylalanine, L-phenylglycine, D-phenylglycine, L-tyrosine or D-tyrosine, comprising hydrogenating said compound in the presence of a

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platinum-rhodium mixed catalyst.

The Scope and Content of the Prior Art (MPEP §2141.01)

Minnaard, et al. teaches the synthesis of enantiomerically pure cyclohexylglycine by hydrogenating phenylglycine using a rhodium catalyst and rhodium catalyst on support. The reaction resulted in a high yield and no racemization occurred. The prior art reference also teaches the use of palladium, platinum or ruthenium as catalysts in the synthesis.

Schuda, et al. teaches the hydrogenation of L-phenylalanine by using a platinum catalyst (i.e. PtO₂) and the reaction result in a high yield and does not undergo racemization.

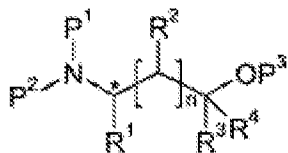
The Difference Between the Prior Art and the Claims (MPEP §2141.02)

The difference between the prior art of *Minnard, et al.* in view of *Schuda, et al.* and the instant invention is that the instant invention uses a mixed platinum-rhodium catalyst whereas the prior art teaches the use of platinum and rhodium separately.

Prima Facie Obviousness-The Rational and Motivation (MPEP §2142-2413)

Applicants are claiming a process for the hydrogenation of a compound, comprising hydrogenating a C₆-C₁₈ aromatic substituted amino acid or C₆-C₁₈ aromatic substituted amino alcohol in the presence of a platinum-rhodium mixed catalyst, wherein said amino acid or amino alcohol is of the formula

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wherein all variables are as defined in claim 28. Claim 41 is

drawn to a process for the hydrogenation of a compound selected from the group consisting of : L-phenylalanine, D-phenylalanine, L-phenylglycine, D-phenylglycine, L-tyrosine or D-tyrosine, comprising hydrogenating said compound in the presence of a platinum-rhodium mixed catalyst. The prior art teaches a similar process wherein either a platinum catalyst or a rhodium catalyst is used and both catalyst are successful in the hydrogenation reaction.

In In re Crockett, et al., 126 USPQ 186, it was well established that when the prior art teaches the use of two catalyst, the idea of combining them would flow logically from prior art and claim to joint use is not patentable. For example, it is obvious to combine rhodium and platinum catalysts in a hydrogenation process of aryl substituted amino acids when the art teaches the use of each catalyst separately in the same type of reaction with reasonable expectation of success. Therefore, it would have been prima facie obvious to one having ordinary skill in the art at the time the invention was made to use a mixed platinum-rhodium catalyst in the hydrogenation of a compound according to claim 28 or 41 based on the teachings in the prior art. A strong prima facie obviousness has been established.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the phrase “has the general formula” renders the products indefinite as the phrase “has the general formula” can be considered open-ended language when not clearly defined and therefore is including additional subject matter in the compounds of the formula I that is not described in the instant specification and is not particularly pointed out or distinctly claimed. A claim relating to a chemical compound cannot be open-ended, but must be claimed with precision. This rejection can be overcome by amending the phrase “has the general formula” to read “of the formula” in claim 28.

Claim 46 recites the limitation “a C₆-C₁₈ aromatic substituted amino acid or C₆-C₁₈ aromatic substituted amino alcohol” which is dependent on claim 41 but the limitation is not present in claim 41. There is insufficient antecedent basis for this limitation in the claim.

IV. Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawquia Young whose telephone number is 571-272-9043. The examiner can normally be reached on 7:00 AM-3:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Shawquia Young/

Examiner, Art Unit 1626

/Rebecca L Anderson/

Primary Examiner, Art Unit 1626